

AAC Assignment

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People with ASD often experience language and communication delays early in childhood. Parents frequently refer their children for examination when they see they are not meeting language developmental milestones due to delays. For many students with ASD, developing communication skills requires the use of alternative and augmentative technologies and methods. Learners who speak little or nothing must acquire alternative communication skills, which are the fundamental forms of communication. Augmentative communication refers to the additional abilities that learners who use language expressively and functionally at some level may need to learn to communicate more successfully (Wheeler et al., 2015). Various tools aid ASD learners in communication. The two tools I chose to discuss further are manual signs and

Manual Signs

Manual signs are an unaided method of communicating with your hands. They can take the form of fingerspelling, in which each sign corresponds to a letter of the alphabet, using ASL or British Sign Language, pantomimes and gestures, or non-standard motions intended to resemble the performance of an actual activity in some way, like shooting a basketball to indicate play. The gestures can be pointing to an object or place of interest. The benefit of this tool is there is no need for external devices that could break or get lost, need to be charged or run on batteries, or take time to start up or shut down; various efficient teaching methods can be used to

teach manual signing. Signs are readily observable in noisy environments (Wheeler et al., 2015). Manual signs are a common use of communication in ASD, especially for children.

In contrast, it also poses some negatives; although using standardized systems like ASL increases the possibility of understanding, especially compared to gestures specific to the individual, not everyone in that person's life may comprehend signing. Learning to sign might make doing other manual skills like writing challenging (Wheeler et al., 2015)). These devices are also expensive; for some, like those living in rural areas, they may be inaccessible.

Research on Manual Signs

In the study "Infants Sign Training and Functional Analysis" (Normand et al., 2011), developing infants were taught manual signs. The stimuli were delivered on a time-based schedule during baseline. During the intervention, progressive prompting and reinforcement were used. The three participants had no vocal language. Under the training settings, all individuals learned to sign, and their signing frequency was significantly higher than during the baseline period. All participants underwent a few short training sessions where they saw independent signing.

Furthermore, the outcomes confirmed a certain degree of functional independence for the targeted verbal operant. In other words, the functional analysis discovered a specific situation or variables that prompted signing. These results are consistent with previous reports that

young children learned to sign quickly and support prior research that signs only happen in specific conditions (Normand et al., 2011). Research notes that this method has many benefits in teaching communication, especially when done early, i.e., in infants and young toddlers. There are some limitations, and researchers suggest that future studies should include parents and that more emphasis should be placed on the degree of generalization that results from the reported sign-teaching approaches, particularly when examined in natural settings with caregivers, and the variables that influence such generalization should be thoroughly studied.

The study "Acquisition of Sign Language by Autistic Children II: Spontaneity and Generalization Effects" (Carr & Kologinsky, 1983) involves three autistic males, ages nine to fourteen, with a nonverbal measured intelligence range of three to five years. It notes that their vocal range was limited to meaningless noises. The study focused on teaching the participants to make unprompted requests of adults using a range of signs; in other words, a sign was only deemed spontaneous if the adult had not interrupted the sign or posed queries like "What do you want?" The adult was only allowed to give the child their undivided attention visually. The training incorporated incidental instruction, including fading, differential reinforcement, and imitative prompting. Two experiments were done; the first was in one setting, and the second involved multiple settings, representing a more naturalistic situation. In both experiments, the participants demonstrated a high level of correct signing. It was noted that

after the experiment, teachers informed the researcher that the children were making the proper signs taught in the study.

Both articles indicate that manual signs were influential during the study; however, this seems to need to be revised when practiced in naturalistic settings or when it is expected to be done spontaneously. Both studies suggest further research using different methods.

Speech-generating devices

Speech-generating devices are tools that assist in communication. They consist of various hardware and software, some specifically made for use as an AAC system and some modified for this purpose, such as apps. Tools in this field have advanced swiftly, which has resulted in potential users benefiting from a more affordable and easily accessible collection of communication tools (Wheeler et al., 2015). This has also led to an increase in affordable tools, which needs more evidence to prove the effectiveness of the tools. When choosing a speech-generating device, parents are advised to factor in cost, language options shown, and how language will be retrieved; it is also essential to assess if the individual has a physical impairment that prevents them from using the device; they will then need a pointer or adaptive switch. The primary objective when choosing a speech-generating device is ensuring that the speech-generating equipment can support the kind of adaptive controller the target user requires.

Research

In the study “Increasing the Vocalizations of Individuals with Autism during Intervention with a Speech-generating Device” (Gevarter et al., 2015). Four participants with ASD and limited vocal speech were taught to produce target vocalizations using a speech-generating device. Parents were asked what the preferred items were for the children, and then the child’s preferred item was displayed along with the preprogrammed app Go Talk displayed on the iPad. The findings imply that for certain ASD persons, augmenting an SGD-based intervention with vocal instruction may enhance vocalizations produced in addition to SGD answers (Gevarter et al., 2015). Three of the four participants showed independent vocalization; it is noted that the participant that did not, was because of the practices used in the study.

The research “Teaching Mands for Information using Speech Generating Devices: A Replication and Extension” (Shillingsburg et al., 2019). Explored using speech generating device to teach commands like who? Which? With three young toddlers diagnosed with ASD. Procedures were evaluated using a multiple baseline across participant’s designs. All participants learned to mand for information and used the information to access preferred items (Shillingsburg et al., 2019). All children demonstrated a deficit in vocal communication. The study used apps like TouchChat, WordPower and Proloquo2Go. The result of the study shows that the participants learned the correct mand with the SGD; the study noted that the participants had to be taught how to remember to bring the device

with them to get the correct mand. It adds that this study supports other bodies of research stating that SGDs can teach kids high-level communication.

Both studies indicate that speech generating device increased independent vocalization in students. Researchers suggest further research is required to assess methods for encouraging the functional use of complex communication skills, given the pervasiveness of technology in homes and schools and the ease with which families and clinicians can now access applications designed to improve the communication of those with significant spoken language deficits (Shillingsburg et al., 2019). Speech generating devices are helpful for children with ASD to communicate, still, it seemed children that had some knowledge of using devices like the iPad benefitted most.

References

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